

## **MAINTENANCE PLAN**

I. **GENERAL.** This plan formalizes the major elements of the Coast Transit Authority maintenance program necessary to implement the adopted Maintenance Policy Statement. The plan is not intended to be all inclusive, but outlines generic areas to be accomplished on an on-going basis and to be specifically supervised by the Maintenance Director.

### **II. GOALS AND OBJECTIVES:**

- A. Vehicle miles per road call: 6,000 miles per mechanical road call
- B. Vehicle miles per quart of oil added: 500 miles
- C. Useful life of standard size heavy-duty transit bus: 12 years or 500,000 miles
- D. Useful life of medium size heavy-duty transit bus: 10 years or 500,000 miles
- E. Useful life of small medium duty transit bus: 7 years or 300,000 miles
- F. Useful life of other vehicles such as regular and specialized vans:  
Gas engine- 4 years or 150,000 miles, Diesel engine- 4 years or 175,000 miles
- G. 10 or less pull out failures per month

### **III. PRE-TRIP AND SAFETY INSPECTION BY OPERATORS:**

A pre-trip and safety inspection will be conducted by each bus operator before pulling out a bus from the garage or relieving on-line. If a defect or safety problem is found, it will be reported to the dispatcher, or the maintenance department immediately. The bus will be changed out and/or a road call will be made if necessary. Otherwise, the inspection form will be turned in to operations upon completion of the operator's run. The Shop Foreman or Night Supervisor will review each form and assign necessary work. The inspection form is two parts. One section is for documentation of pre-trip defects the other section is for documentation of post-trip defects.

### **IV. INSPECTION AND SERVICING OF VEHICLES BY MAINTENANCE DEPARTMENT:**

The operator will park each vehicle that is run at the fuel island. The vehicle will be fueled by maintenance and inspected for any damage to the exterior. The amount of fuel used will be documented. Any exterior damage will be reported to the Shop Foreman or Night Supervisor for documentation and will be brought to the attention of the Route Supervisor if they are available. All exterior bus damage will be documented on the bus and tire damage report. Each vehicle will have the exterior washed and the interior swept and mopped. Other clean up will be performed on an as needed basis. All engine compartment fluid levels will be checked and topped off as necessary. All fluids used will be documented on the daily fluids sheet. An engine compartment inspection will be performed to determine if there are obvious defects that need repair (i.e., damaged belts, leaks). All external lights will be inspected for proper function. The horn and windshield wipers will be checked for proper operation. All tires will be checked for proper inflation and defects. All defects that are found while these inspections are performed will be repaired immediately or reported to the Shop Foreman or the Night Supervisor for assignment of work. All noted defects will be documented on the daily defect sheet.

The maintenance department on the day that the defect is reported will look at all drivers' reports of vehicle defects. A work order will be generated to document the work that takes place. The drivers report and the work order will be retained in the vehicle file for at least a period of one year after the date of report of defect as required by U. S. Department of Transportation regulations.

## **V. VEHICLE REPAIRS**

All reports of vehicle defects whether reported by an operator or found in the shop will be investigated on the day that the report was made. The defect will either be repaired, the work will be deferred to a later date or the vehicle will be placed out of service until repairs can be performed. All work will be documented on a work order. All deferred work will be placed on an open work order list to insure that all needed work is performed. When a report of defect is investigated and the problem is found, a determination will be made of the severity of the defect if the defect is not repaired immediately. If a minor problem exists that will not or does not have the potential to inconvenience or endanger the passengers or the operator, the vehicle may be allowed to be placed in service and the work deferred to a later date. All deferred work orders will be turned in to the Shop Foreman for documentation and assignment of work. A vehicle that is not repaired immediately when a safety related defect is detected, shall be placed out of service until proper repairs are made and an out of service tag will be placed on the steering wheel to insure the vehicle is not operated until repairs are made. A nightly report of out of service vehicles shall be turned in to the dispatch office to assist them in scheduling the next day's runs.

## **VI. VEHICLE PREVENTATIVE MAINTENANCE**

Preventative maintenance will be given a high priority to maintain cost efficiency and fleet reliability. Light and medium duty buses will have extensive preventative maintenance performed every 4,000 miles. Heavy-duty buses will have extensive preventative maintenance performed every 6,000 miles. Preventative maintenance will be performed on each vehicle in the range of 500 miles before or after the exact mileage due. Preventive maintenance schedules will be tracked on a board for this purpose located in the shop area for all maintenance personnel to observe. The preventative maintenance work sheets will be continually evaluated and modified to improve the program. Monthly road call reports will be evaluated for possible improvements to the preventative maintenance program that could reduce road calls.

## **VII. DEPARTMENT OF TRANSPORTATION ANNUAL VEHICLE SAFETY INSPECTION**

In accordance with U. S. Department Of Transportation regulations, each vehicle in our fleet will be given an annual safety inspection. After the vehicle has passed the inspection, an inspection label will be placed on the vehicle in a visible area. The Shop Foreman will keep the inspection interval.

## **VIII. REMOVAL OF MONEY VAULTS FROM VEHICLES**

The money vaults will be removed from each vehicle that has money in the vault nightly. The vault will be removed while the vehicle is in the Service Lane inside the garage where several people are

present at all times. The vault removal and installation shall be documented on the daily fare box change form.

## **IX. VEHICLE RELATED MONTHLY REPORTS**

The following reports will be generated on a monthly basis and delivered to the Maintenance Director for evaluation, analysis and record keeping purposes.

ROAD CALL REPORT: All mechanical and non-mechanical road calls will be documented.

DEFERRED WORK REPORT: All deferred work activity will be documented.

PREVENTATIVE MAINTENANCE REPORT: All preventative maintenance performed and the mileage of performance will be documented.

PULL OUT FAILURE REPORT: All pull out failures will be documented.

OPERATING COST REPORT: A record of all materials and labor required to maintain a vehicle and their cost will be generated. The report will note what the operating cost per mile of the vehicle was.

OIL USEAGE REPORT: A record of make up oil used. The report will note the quarts of oil used per mile.

## **X. GENERAL MAINTENANCE OF BUILDINGS, GROUNDS AND BUS STOPS**

All facilities will be kept clean and in good repair at all times. The garage area will be cleaned daily. The office areas will be cleaned twice a week. Maintenance will be performed on a weekly and monthly basis. Repairs to broken equipment will be performed on an as needed basis as soon as is practical. The quality of facility maintenance is to be inspected and insured by the General Maintenance Supervisor.

Benches and bus stops will be inspected, cleaned and necessary maintenance performed on a weekly basis. Benches and bus stops will be kept clean, safe and in good repair at all times. The quality of bench and bus stop maintenance is to be inspected and insured by the General Maintenance Supervisor.

Bus Stations will be kept clean, safe and in good repair at all times. Each of the comfort stations will be cleaned and inspected twice each day. The cleaning and inspection will be documented on the inspection report form. The inspection report form is to be submitted at the end of each month. Any maintenance that is required will be reported to the General Maintenance Supervisor as soon as a maintenance problem is noticed. Every effort will be made to perform preventative maintenance to avoid costly repairs. All broken equipment and damage will be repaired as soon as is practical. Major maintenance projects will be advertised for bids and the work awarded to a private sector contractor.

## **XI. WARRANTY RECOVERY PLAN**

All equipment will be maintained according to the manufacturers specifications. Coast Transit Authority's preventive maintenance program will meet or exceed what the manufacturer requires. A listing of all equipment covered by the manufacturers warranty will be kept on file. A separate file for each piece of equipment will be maintained that includes the operating manual, maintenance manual, warranty documents and documentation of proof of purchase.

If a piece of equipment that is covered under warranty fails, the manufacturer shall be notified immediately. The equipment shall be repaired in accordance with the manufacturers instructions. The manufacturer shall be held responsible for repairing or replacing the equipment in accordance with the terms of the warranty agreement.

If Coast Transit Authority performs the repairs, the manufacturer shall be invoiced for the work. The payment for the invoice for warranty work shall be tracked in the accounting departments accounts receivable system. Delinquent payments shall be followed up on in a timely manner.